

ORIGINAL

BEFORE THE

Federal Communications Commission

WASHINGTON, D.C. 20554

In the Matter of)

)
Rulemaking to Amend Parts 1, 2, 21, and 25 of the)
Commission's Rules to Redesignate the)
27.5-29.5 GHz Frequency band, to Reallocate)
the 29.5-30.0 GHz Frequency Band, to Establish)
Rules and Policies for Local Multipoint Distribution)
Service and for Fixed Satellite Services)

CC Docket No. 92-297

RECEIVED

NOV - 5 1996

Federal Communications Commission
Office of Secretary

DOCKET FILE COPY ORIGINAL

To: The Commission

CONSOLIDATED REPLY OF TRW INC.

TRW Inc. ("TRW"), by its attorneys and pursuant to Section 1.429 of the Commission's Rules, hereby replies to the comments that were filed separately by Lockheed Martin Corporation ("Lockheed Martin") and Hughes Communications Galaxy, Inc. ("Hughes") in response to TRW's Petition for Clarification and/or Partial Reconsideration ("TRW Petition") of the First Report and Order in the above-captioned proceeding.^{1/} TRW filed its Petition in order to secure minor revisions to Sections

^{1/} Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services, FCC 96-311 (released July 22, 1996) ("First Report and Order").

25.258(b) and (d) that it identified as being necessary to bring the rules into conformity with the underlying sharing agreements they were intended to codify.^{2/}

Both Lockheed Martin and Hughes agree that some clarification of the rule provisions flagged by TRW is appropriate. Indeed, Hughes finds TRW's suggested revision to Section 25.258(b) to be acceptable, while Lockheed Martin finds TRW's suggested revision to Section 25.258(d) to be acceptable. Both commenters, however, make additional language suggestions that TRW addresses herein.

In its comments, Lockheed Martin suggests that Section 25.258(b) should be modified to reflect that frequency/polarization selections by geostationary fixed-satellite service ("GSO FSS") operators should minimize unacceptable interference into space stations of both GSO FSS systems and NGSO MSS feeder link systems. It urges a slightly different formulation of Section 25.258(b) than the one TRW suggested in Appendix 1 to its Petition.^{3/} Lockheed Martin also suggests that Section 25.258(b) should be modified to reflect that geographic separation is a viable means for

^{2/} See TRW Petition at 3-4 and Appendix 1.

^{3/} Lockheed Martin Comments at 3-5. In its own Petition, TRW proposed that Section 25.258(b) be revised as follows:

(b) Licensed GSO FSS systems shall, to the maximum extent possible, operate with frequency/polarization selections, in the vicinity of operational or planned NGSO MSS feeder link earth station complexes, that will minimize instances of unacceptable interference. ~~to the GSO FSS space stations.~~

TRW Petition at Appendix 1.

minimizing unacceptable interference between GSO FSS systems and feeder links of NGSO MSS systems in the band 29.25-29.5 GHz.^{4/}

In making its suggested revision to the language of Section 25.258(b), as promulgated in the First Report and Order, TRW's intent was to ensure that the agreement reached with the GSO FSS community earlier this year was accurately reflected. It attempted to do this by removing language that incorrectly specified GSO FSS space stations as the sole beneficiaries of the actions to be taken under the terms of the rule, with the result being the restatement of the obligation as one to minimize instances of unacceptable interference. Lockheed Martin's first suggestion — which is to add a specific reference to NGSO MSS space stations as a beneficiary of the rule — accomplishes the same objective as TRW's submission, and therefore is acceptable to TRW.

With respect to Lockheed Martin's second comment about Section 25.258(b) — i.e., that language should be added to confirm that geographic separation between NGSO MSS feeder link and GSO/FSS earth stations in the band 29.25-29.5 GHz is an acceptable alternative to the sharing principles reflected elsewhere in the rule — TRW is in agreement in principle with the stated rationale.^{5/} TRW believes,

^{4/} Id. at 5-6.

^{5/} In this regard, Lockheed Martin correctly notes that unlike some other proposed GSO FSS systems, the Astrolink^{TM/SM} system would operate a small number of relatively large diameter gateway earth stations in the 29.25-29.5 GHz band, rather than large numbers of small-diameter/ubiquitously-deployed earth

however, that a slight revision to the wording proposed by Lockheed Martin is appropriate. Specifically, the language should reflect that the burden of achieving geographic separation is on GSO FSS systems.^{6/}

As a result of both foregoing points, TRW proposes the following provision as a substitute for the provision suggested by Lockheed Martin:

(b) Licensed GSO FSS systems shall, to the maximum extent possible, operate with frequency/polarization selections, in the vicinity of operational or planned NGSO MSS feeder link earth station complexes, **or alternatively, GSO FSS systems shall operate with geographic separation from NGSO MSS feeder link earth station complexes in order to provide uplink beam isolation,** that will minimize instances of unacceptable interference to the GSO FSS **and NGSO MSS** space stations.^{7/}

terminals. These considerations give rise to the possibility that, with further coordinations and with modest separations from OdysseyTM feeder link earth stations, Astrolink^{TM/SM} gateway terminals may be able to use the 29.25-29.5 GHz band in both polarizations without causing unacceptable interference to or experiencing unacceptable interference from OdysseyTM.

^{6/} The basis for this request stems from the accommodations that have been reached between TRW and Motorola (the other U.S. proponent of NGSO MSS feeder links in the band 29.1-29.5 GHz band), and between NGSO MSS feeder link operators and proposed local multipoint distribution service ("LMDS") operators in the band 29.1-29.25 GHz — all of which are reflected in other rules promulgated in the First Report and Order. (Unlike the OdysseyTM/GSO FSS case, geographic isolation is the only way in which OdysseyTM can share spectrum with both Motorola's feeder link system and with LMDS operators.) Under these accommodations, TRW has already agreed to constrain significantly its flexibility to site OdysseyTM feeder link earth station complexes, and thus its flexibility to provide geographic separation from the GSO FSS earth stations with which OdysseyTM will share spectrum in the 29.25-29.5 GHz band is very limited.

^{7/} The black-lining in this suggested revision is to Section 25.258(b), as it appears in the First Report and Order.

TRW believes that this revision accomplishes both objectives stated by Lockheed Martin for Section 25.258(b), along with the one identified in TRW's Petition, and encourages its adoption.

The focus of Hughes's comments on TRW's Petition is placed on the TRW's suggested clarification of Section 25.258(d). Hughes states that it is concerned that TRW's suggested inclusion of the word "additional" at the start of Section 25.258(d) would create ambiguity.^{8/} Specifically, Hughes recognizes that "the GSO FSS industry has agreed that sharing with TRW is possible[,] but remains concerned about the language of the rule because of the fact that no such sharing between Motorola's NGSO MSS feeder link system and GSO FSS interests has yet been shown to be feasible."^{9/}

TRW suggested the inclusion of the word "additional" at the start of Section 25.258(d) to clarify that only NGSO MSS feeder link systems *other than*

^{8/} Hughes Comments at 13. As suggested in TRW's Petition, Section 25.258(d) would be revised to read as follows:

(d) **Additional** NGSO MSS systems applying to use the 29.25 - 29.5 GHz band, for feeder link earth station uplink, will have to demonstrate that their system can share with the authorized U.S. GSO/FSS **and NGSO MSS** systems operating in this band.

See TRW Petition at Appendix 1. Hughes apparently does not disagree with TRW's proposal to add the words "and NGSO MSS" in the last phrase of the new rule.

^{9/} Hughes Comments at 13 & n.26.

Odyssey™ would have to make the demonstration contemplated by the rule. Sharing in the band 29.25-29.5 GHz between *Odyssey™* and GSO FSS interests, as Hughes acknowledges, has been shown to be practicable. TRW agrees with Hughes that compatibility demonstrations — with authorized GSO FSS and NGSO MSS feeder link systems — are required only of applicants that first propose to use the band 29.25-29.5 GHz for NGSO MSS feeder links after the date of the First Report and Order.^{10/}

As a result, if the Commission were to clarify, in the text of its decision on reconsideration, that the demonstration contemplated in Section 25.258(d) from NGSO MSS feeder link applicants in the band 29.25-29.5 GHz is not required to be made by TRW (for *Odyssey™*), TRW is prepared to forego its proposal that the word “additional” be added to the start of the rule.^{11/} If this suggestion is accepted, Section 25.258(d) would be revised as follows:

(d) NGSO MSS systems applying to use the 29.25 - 29.5 GHz band, for feeder link earth station uplink, will have to demonstrate that their system can share with the authorized U.S. GSO/FSS **and NGSO MSS** systems operating in this band.

^{10/} *Id.* at 13.

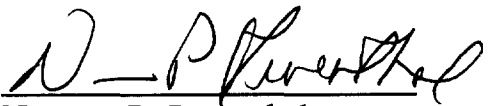
^{11/} TRW has no objection to Hughes’s proposal to remove the word “operating” from the last phrase of the rule. See Hughes Comments at 13.

CONCLUSION

In short, TRW has no substantial objection to the suggestions made by either Lockheed Martin or Hughes with respect to the clarifications of Sections 25.258(b) and 25.258(d) that were proposed in TRW's Petition. It therefore respectfully urges the Commission to revise the two rules in the manner articulated above.

Respectfully submitted,

TRW Inc.

By: 
Norman P. Leventhal
Walter P. Jacob

Leventhal, Senter & Lerman
2000 K Street, N.W.
Suite 600
Washington, D.C. 20006
(202) 429-8970

November 5, 1996

Its Attorneys

CERTIFICATE OF SERVICE

I, Katharine B. Squalls certify that a copy of the foregoing "Consolidated Reply of TRW Inc." was mailed, first-class postage prepaid, this 5th day of November, 1996 to each of the following:

*The Honorable Reed E. Hundt
Federal Communications Commission
1919 M Street, N.W.
Room 814
Washington, DC 20554

*The Honorable James H. Quello
Federal Communications Commission
1919 M Street, N.W.
Room 802
Washington, DC 20554

*The Honorable Rachelle B. Chong
Federal Communications Commission
1919 M Street, N.W.
Room 844
Washington, DC 20554

*The Honorable Susan Ness
Federal Communications Commission
1919 M Street, N.W.
Room 832
Washington, DC 20554

*Mr. Donald Gips
International Bureau
Federal Communications Commission
2000 M Street, N.W.
Room 827
Washington, DC 20554

*By hand delivery

***Mr. Thomas S. Tycz**
International Bureau
Federal Communications Commission
2000 M Street, N.W
Room 811
Washington, DC 20554

***Ms. Cecily C. Holiday**
International Bureau
Federal Communications Commission
2000 M Street, N.W.
Room 520
Washington, DC 20554

***Mr. Harold Ng**
International Bureau
Federal Communications Commission
2000 M Street, N.W.
Room 512
Washington, DC 20554

***Karl Kensinger, Esq.**
International Bureau
Federal Communications Commission
2000 M Street, N.W.
Room 521
Washington, DC 20554

***Ms. Giselle Gomez**
International Bureau
Federal Communications Commission
2000 M Street, N.W.
Room 507
Washington, DC 20554

***Jennifer Gilsenan, Esq.**
International Bureau
Federal Communications Commission
2000 M Street, N.W.
Room 511
Washington, DC 20554

***By hand delivery**

*Ms. Julie Garcia
International Bureau
Federal Communications Commission
2000 M Street, N.W.
Room 506
Washington, DC 20554

Veronica M. Ahern, Esq.
Nixon, Hargrave, Devans & Doyle, L.L.P.
One Thomas Circle, N.W.
Suite 700
Washington, DC 20005

Mitchell Lazarus, Esq.
Arent, Fox Kintner, Plotkin & Kahn
1050 Connecticut Avenue, N.W.
Suite 600
Washington, DC 20036-5339

Gerald Musarra, Esq.
Space & Strategic Missiles
Lockheed Martin Corporation
1725 Jefferson Davis Highway
Arlington, VA 22202

Debra A. Smilley-Weiner, Esq.
Deputy General Counsel
Lockheed Martin Telecommunications
1272 Borregas Avenue
Building 551
Sunnyvale, CA 94089

Raymond G. Bender, Jr., Esq.
Carlos M. Nalda, Esq.
Dow, Lohnes & Albertson, P.L.L.C.
1200 New Hampshire Avenue, N.W.
Suite 800
Washington, DC 20036-6802

Leonard Robert Raish, Esq.
Fletcher, Heald & Hildreth
1300 N. 17th Street
11th Floor
Rosslyn, VA 22209-3801

Peter M. Connolly, Esq.
Koteen & Naftalin
1150 Connecticut Avenue, N.W.
Washington, DC 20005

Joseph A. Godles, Esq.
W. Kenneth Ferree, Esq.
Goldberg, Godles, Winer & Wright
1229 19th Street, N.W.
Washington, DC 10036

Stephen L. Goodman, Esq.
Hairprin, Temple, Goodman & Sugru
1100 New York Avenue, N.W.
Suite 650, East Tower
Washington, DC 20005

Philip Malet, Esq.
Alfred Mamlet, Esq.
Brent Weingardt, Esq.
Steptoe & Johnson, L.L.P.
1330 Connecticut Avenue, N.W.
Washington, DC 20036

John P. Janka, Esq.
Steven H. Schulman, Esq.
Latham & Watkins
1001 Pennsylvania Avenue, N.W.
Suite 1300
Washington, DC 20004

Philip V. Otero, Esq.
GE American Communications
1750 Old Meadow Road
McLean, VA 22101

Judith R. Maynes, Esq.
Elaine R. McHale, Esq.
AT&T Corporation
295 N. Maple Avenue
Basking Ridge, NJ 07920

Peter A. Rohrbach, Esq.
Karis A. Hastings, Esq.
Hogan & Hartson, L.L.P.
555 Thirteenth Street, N.E.
Washington, DC 20004

Thomas J. Keller, Esq.
Julian L. Shepard, Esq.
Verner, Liipfert, Bernhard, McPherson & Hand
901 15th Street, N.W.
Suite 700
Washington, DC 20005

Andrew D. Lipman, Esq.
Margaret M. Charles, Esq.
Swidler & Berling, Chartered
3000 K Street, N.W.
Suite 300
Washington, DC 20007

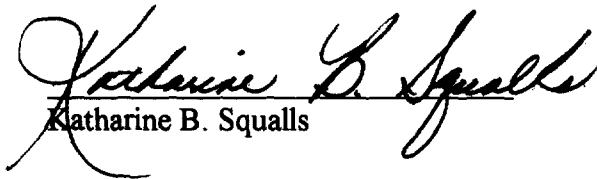
Robert L. Pettit, Esq.
Michael K. Baker, Esq.
Wiley, Rein & Fielding
1776 K Street, N.W.
Washington, DC 20006

Jeffrey H. Olson, Esq.
Paul, Weiss, Rifkind, Wharton & Garrison
1615 L Street, N.W.
Washington, DC 20036-5694

Antoinette Cook Bush, Esq.
Jay L. Birnbaum, Esq.
Jeffry A. Brueggeman, Esq.
Skadden, Arps, Slate, Meagher I& Flom
1440 New York Avenue, N.W.
Washington, DC 20036

Stuart F. Feldstein, Esq.
Terri B. Natoli, Esq.
Fleischman and Walsh, L.L.P.
1400 16th Street, N.W.
Washington, DC 20036

Michael D. Kennedy, Esq.
Barry Lambergman, Esq.
Motorola, Inc.
1350 I Street, N.W.
Washington, DC 20006


Katharine B. Squalls